## (19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 29 September 2005 (29.09.2005)

**PCT** 

ΑU

## (10) International Publication Number WO 2005/090388 A1

- (51) International Patent Classification<sup>7</sup>: C07K 7/50, A61K 38/12, A61P 35/00, 25/00, 25/08, 25/32
- (21) International Application Number:

PCT/AU2005/000400

- (22) International Filing Date: 21 March 2005 (21.03.2005)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:

2004901447 19 March 2004 (19.03.2004)

- (71) Applicant (for all designated States except US): THE UNIVERSITY OF QUEENSLAND [AU/AU]; ST LU-CIA, Queensland 4072 (AU).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): FAIRLIE, David, P. [AU/AU]; 73 Trevallyan Drive, Springwood, Queensland 4127 (AU). SHEPHERD, Nicholas, E. [AU/AU]; 3/55 Bishop Street, St Lucia, Queensland 4067 (AU).
- (74) Agents: ARGAET, Victor, Peter et al.; Davies Collison Cave, Level 3, 303 Coronation Drive, Milton, Queensland 4064 (AU).

- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## **Published:**

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ALPHA HELICAL MIMICS, THEIR USES AND METHODS FOR THEIR PRODUCTION

(57) Abstract: This invention discloses short chain peptides that have been constrained to adopt an alpha helical conformation and their use as alpha helical scaffolds for directing amino acid side chains into positions analogous to those found in longer chain alpha helical peptides and for attaching peptidic or non-peptidic appendages in order to mimic side chains of longer alpha helical peptides. More particularly the invention discloses alpha helical cyclic pentapeptides and their use as alpha helical scaffolds or macrocyclic alpha helical modules, either alone, or within longer chain peptides or attached to other macrocyclic peptides or attached to non-peptidic structures, for the purpose of mimicking naturally occurring peptides or proteins, and as agonists or antagonists of the biological activity of naturally-occurring peptides or proteins or for the preparation of new materials.

